Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claims 1, 2, 9, 14, 15, 18, 19, 26, 27, 37 and 38 without prejudice.

Please amend claims 3-8, 10-13, 16, 17, 20, 21 and 28-34 as indicated below (material to be inserted is in **bold and underline**, material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[ ]]):

Listing of Claims:

1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) ~~The method of claim 2,~~ **A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device,** each data packet having an actual length and including a header with a field giving a total length value for the data packet **and a next-hop address, the method comprising:**

receiving the data packets at the network traffic device;

~~wherein~~ deconsolidating any consolidated data packets ~~includes~~**, including** extracting the total length value from the header, comparing the total length value to the actual length, and if the actual length is longer than the total length value, removing a segment from the front of the data packet equal in length to the total length value, and then buffering the segment

after deconsolidating any consolidated data packets, buffering the data packets;

identifying a first data packet;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

4. (Currently Amended) The method of claim 3, wherein the extracting, comparing and removing ~~steps~~ are performed repeatedly until the actual length is equal to the total length value.

5. (Currently Amended) ~~The method of claim 1, wherein receiving the data packets includes~~ **A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device, each of the plurality of packets having a next-hop address, the method comprising:**

receiving the data packets at the network traffic device, including checking whether the next-hop address for each data packet is a local next-hop address, and forwarding packets with the local next-hop address to the local next-hop address without consolidation;

buffering the data packets;

identifying a first data packet;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

6. (Currently Amended) ~~The method of claim 1, each data packet having~~ **A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device, each of the plurality of packets having a next-hop address and** a final destination address**, the method comprising:**

receiving the data packets at the network traffic device;

buffering the data packets, wherein buffering the data packets includes sorting the packets by final destination address for storage in a plurality of buffers;

identifying a first data packet;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

7. (Currently Amended) ~~The method of claim 1~~ **A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device, each of the plurality of packets having a next-hop address, the method comprising:**

receiving the data packets at the network traffic device;

buffering the data packets, wherein buffering the data packets includes sorting the data packets by next-hop address for storage in a plurality of buffers;

identifying a first data packet;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

8. (Currently Amended) ~~The method of claim 1,~~ A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device, each of the plurality of packets having a next-hop address, the method comprising:

receiving the data packets at the network traffic device, wherein selected data packets have a priority flag;

buffering the data packets, ~~and~~ wherein buffering the data packets includes sorting the data packets by presence of the priority flag;

identifying a first data packet;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

9. (Cancelled)

10. (Currently Amended) ~~The method of claim 1,~~ **A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device,** each data packet having an actual length **and a next-hop address, the method comprising:**

receiving the data packets at the network traffic device;

buffering the data packets;

identifying a first data packet, wherein identifying a first data packet includes comparing the actual length of the data packet to a maximum transmission ~~length~~ **unit;**

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

11. (Currently Amended) The method of claim 10, wherein identifying a second data packet with the same next-hop address as the first data packet includes checking the actual length of the second data packet and adding the actual length of the second data packet to the actual length of the first data packet to find a total length, comparing the total length to the maximum transmission ~~length~~ **unit**, and not consolidating the first data packet and the second data packet if the total length is equal to or greater than the maximum transmission ~~length~~ **unit**.

12. (Currently Amended) The method of claim [[1]] **10**, wherein the network traffic device is one of a router, bridge and switch.

13. (Currently Amended) The method of claim [[1]] **10**, each of the data packets having opposing ends, wherein consolidating the first data packet with the second data packet to form a consolidated packet includes joining the first data packet and the second data packet in an end-to-end manner.

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) ~~The method of claim 15,~~ **A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device, each of the plurality of data packets having a next-hop address, the method comprising:**

generating the plurality of voice data packets;

tagging each of the voice data packets with a tag identifying the data packet as a voice data packet at a gateway;

sending the voice data packets over the network from the gateway;

receiving the data packets at the network traffic device;

buffering the data packets, wherein buffering the data packets includes storing data packets with the tag in separate buffers from data packets without the tag;

identifying a first data packet;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

17. (Currently Amended) ~~The method of 16,~~ A method of optimizing the transmission of a plurality of data packets across a data network at a network traffic device, each of the plurality of data packets having a next-hop address, the method comprising:

generating the plurality of voice data packets;

tagging each of the voice data packets with a tag identifying the data packet as a voice data packet at a gateway;

sending the voice data packets over the network from the gateway;

receiving the data packets at the network traffic device;

buffering the data packets;

identifying a first data packet, wherein identifying the ~~selected~~ first data packet includes identifying the first data packet by presence of the tag;

identifying a second data packet with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated data packet.

18. (Cancelled)

19. (Cancelled)

20. (Currently Amended) ~~The method of claim 19,~~ **A method of transmitting a plurality of voice data packets across a network, each of the plurality of voice data packets having a next-hop address and including a tag identifying the packet as a voice data packet, the method comprising:**

receiving data packets at a network traffic device, the data packets including plural voice data packets and plural non-voice data packets;

checking a first data packet for the tag;

after checking a first data packet for the tag, buffering each of the received data packets, wherein buffering each of the received data packets includes buffering data packets with the tag separately from data packets without the tag;

if the first data packet has the tag, then identifying a second data packet with the tag and with the same next-hop address as the first data packet;

consolidating the first data packet with the second data packet to form a consolidated packet; and

transmitting the consolidated packet.

21. (Currently Amended) A method of optimizing transmission of a plurality of data packets across a data network at a network traffic device, the network traffic device having a buffer, each of the plurality of data packets being stored in the buffer and having a next-hop address, the method comprising:

selecting a first data packet from the plurality of stored packets;

determining the next-hop address for the first data packet;

checking the size of the first data packet;

comparing the size of the first data packet to a predetermined maximum transmission unit;

if the size of the first data packet is smaller than the maximum transmission unit, then identifying a second data packet from the plurality of stored data packets with the same next-hop address as the selected data packet;

checking the size of ~~first~~ **second** data packet;

adding the size of the first data packet and the second data packet to find a total size;

comparing the total size to the maximum transmission unit;

if the total size is less than or equal to the maximum transmission unit, consolidating the selected data packet and the second data packet to form a consolidated packet; and

transmitting the consolidated packet.

22. (Original) The method of claim 21, wherein selecting a data packet from the plurality of buffered data packets includes checking for an indicator contained within the data packet indicating that the data packet is to be consolidated.

23. (Original) The method of claim 22, wherein the indicator is a tag indicating the type of data contained within the packet.

24. (Original) The method of claim 22, wherein the indicator is a priority flag contained within a header of the data packet.

25. (Original) The method of claim 21, further comprising identifying a third data packet from the plurality of buffered data packets with the same next-hop address as the consolidated packet, checking the size of the third packet, and

repeating the adding, comparing, and consolidating steps before transmitting the consolidated packet.

26. (Cancelled)

27. (Cancelled)

28. (Currently Amended) ~~The network traffic forwarding system of claim 27,~~ **A network traffic forwarding system configured to optimize flow of data packets across a data network,** each data packet having an actual length **and a next-hop address,** and including a header with a field giving a total length value for the data packet, **the forwarding system comprising:**

a plurality of network interface ports configured to be connected to the network to send and receive data packets;

memory configured for buffering received packets; and

a processor configured to deconsolidate any received data packets that are consolidated packets, wherein the processor is configured to extract the total length value from the header, to compare the total length value to the actual length, and if the actual length is longer than the total length value, to remove a segment from the front of the data packet equal in length to the total length value, and then to buffer the segment, and wherein, **upon receipt of a first data packet by one of the plurality of network interface ports, the processor is configured to identify a second data packet buffered in the memory with the same next-hop address as the first data packet, and to consolidate the first data packet and the second data packet to form a consolidated packet for transmission across the network**.

29. (Currently Amended) The network traffic forwarding system of claim 28, wherein the processor is configured to ~~repeat the~~ **repeatedly** extract, compare and remove ~~steps repeatedly~~ until the actual length is equal to the total length value.

30. (Currently Amended) ~~The network traffic forwarding system of claim 26,~~ **A network traffic forwarding system configured to optimize flow of data packets across a data network, the data packets each having a next-hop address, the forwarding system comprising:**

a plurality of network interface ports configured to be connected to the network to send and receive data packets;

memory configured for buffering received packets, wherein the memory is divided into a plurality of buffers**; and**

a processor, ~~and wherein the processor is~~ configured to sort received data packets into the plurality of buffers by next-hop address**, and upon receipt of a first data packet by one of the plurality of network interface ports, to identify a second data packet buffered in the memory with the same next-hop address as the first data packet, and to consolidate the first data packet and the second data packet to form a consolidated packet for transmission across the network**.

31. (Currently Amended) ~~The network traffic forwarding system of claim 26,~~ **A network traffic forwarding system configured to optimize flow of data packets across a data network, the data packets each having a next-hop address, the forwarding system comprising:**

a plurality of network interface ports configured to be connected to the network to send and receive data packets;

memory configured for buffering received packets; and

a processor configured, upon receipt of a first data packet by one of the plurality of network interface ports, to identify a second data packet buffered in the memory with the same next-hop address as the first data packet, and to consolidate the first data packet and the second data packet to form a consolidated packet for transmission across the network, wherein the processor is further configured to determine whether the next-hop address of the selected data packet is a local address, and if it is a local address, then not to identify a second data packet.

32. (Currently Amended) ~~The network traffic forwarding system of claim 26,~~ A network traffic forwarding system configured to optimize flow of data packets across a data network, each data packet having an actual length and a next-hop address, the forwarding system comprising:

a plurality of network interface ports configured to be connected to the network to send and receive data packets;

memory configured for buffering received packets,; and

a processor configured, upon receipt of a first data packet by one of the plurality of network interface ports, to identify a second data packet buffered in the memory with the same next-hop address as the first data packet, and to consolidate the first data packet and the second data packet to form a consolidated packet for transmission across the network, wherein the processor is further configured to compare the actual length of the first data packet to a maximum transmission ~~length~~ unit, and if the actual length of the first data packet is

greater than or equal to the maximum transmission ~~length~~ **unit**, to transmit the selected data packet without consolidation.

33. (Currently Amended) The network traffic forwarding system of claim [[26]] **32**, wherein the processor is **further** configured to check the actual length of the second data packet, to add the actual length of the second data packet to the actual length of the selected data packet to find a total length, to compare the total length to the maximum transmission ~~length~~ **unit**, and not to consolidate the selected data packet and second data packet if the total length is equal to or greater than the maximum transmission ~~length~~ **unit**.

34. (Currently Amended) ~~The network traffic forwarding system of claim 26,~~ **A network traffic forwarding system configured to optimize flow of data packets across a data network, the data packets each having a next-hop address, the forwarding system comprising:**

a plurality of network interface ports configured to be connected to the network to send and receive data packets;

memory configured for buffering received packets; and

a processor ~~wherein the processor is~~ configured to check the selected packet for an indicator contained within the packet indicating that the packet is to be consolidated**, and upon receipt of a first data packet by one of the plurality of network interface ports, to identify a second data packet buffered in the memory with the same next-hop address as the first data packet, and to consolidate the first data packet and the second data packet to form a consolidated packet for transmission across the network**.

35. (Original) The network traffic forwarding system of claim 34, wherein the indicator is a priority flag contained within a header of the packet.

36. (Original) The network traffic forwarding system of claim 35, wherein the indicator is a tag contained within the data packet that indicates the type of data contained within the packet.

37. (Cancelled)

38. (Cancelled)

39. (Original) An article comprising:

a storage medium having a plurality of machine-readable instructions, the instructions being configured to be executed by a network traffic device to optimize the transmission of a plurality of data packets across a data network at the network traffic device, the network traffic device having a buffer, each of the plurality of data packets being stored in the buffer and having a next-hop address, wherein execution of the instructions provides for the steps of

selecting a first data packet from the plurality of stored packets;

determining the next-hop address for the first data packet;

checking the size of the first data packet;

comparing the size of the first data packet to a predetermined maximum transmission unit;

if the size of the first data packet is smaller than the maximum transmission unit, then identifying a second data packet from the plurality of stored data packets with the same next-hop address as the selected data packet;

checking the size of first data packet;

adding the size of the first data packet and the second data packet to find a total size;

comparing the total size to the maximum transmission unit;

if the total size is less than or equal to the maximum transmission unit, consolidating the selected data packet and the second data packet to form a consolidated packet; and

transmitting the consolidated packet.